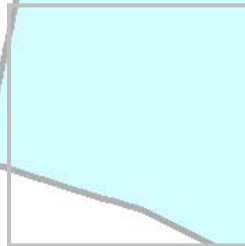
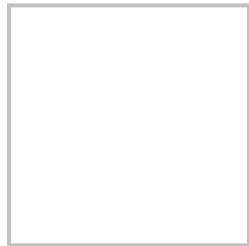
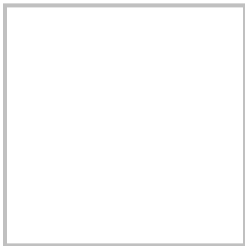




Lexington-Fayette County Hazard Mitigation Plan



May 2005



Division of Environmental and
Emergency Management

Executive Summary

Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act enacted under the Disaster Mitigation Act of 2000 provided new and revitalized approaches to mitigation planning. Section 322 established a new requirement for Local Mitigation Plans, and authorized up to 7% of Hazard Mitigation Grant Program (HMGP) funds available to a State to be used for development of State, Tribal, and Local Mitigation Plans. The new section emphasizes the need for State, Tribal, and Local entities to closely coordinate mitigation planning and implementation efforts. The most successful of these plans – where practical, meaningful mitigation actions have been the result – have two common elements:

- Comprehensive risk and capability assessments that form a solid foundation for decision-making; and
- Input from a wide range of stakeholders who would play a role during implementation of recommended mitigation actions at the Federal, State, and Local levels.

The Disaster Mitigation Act of 2000 emphasizes greater interaction between State and Local mitigation planning activities, and highlights the need for improved linkage of hazard and capability analyses to State and Local hazard mitigation strategies.

The implementation of planned, pre-identified, cost-effective mitigation actions based on a sound hazard identification and risk assessment will make a major contribution to reducing Lexington-Fayette County's disaster losses.

The purpose of the Lexington-Fayette County Hazard Mitigation Plan is to provide guidance for hazard mitigation in Lexington-Fayette County. It identifies hazard mitigation goals, objectives, and recommended mitigation actions for local government that will reduce injury and damage from natural hazards.

Hazard mitigation-- defined by the Federal Emergency Management Agency (FEMA) as any action taken to eliminate or reduce the long-term risk to human life and property from natural and technological hazards-- is crucial to the citizens of Lexington-Fayette County. Because of the exposure to many kinds of hazards and natural disaster events, in particular floods, tornadoes, severe storms and severe winter storms, among others, Lexington-Fayette County understands the need for improved information for decision-making in disaster planning.

Recognizing that the impact and effects of most disaster events can be lessened by mitigation planning and preventative measures, this Local Hazard Mitigation Plan has been written to establish a guide for Lexington-Fayette County to identify cost effective mitigation

measures, including reduction or avoidance, that can be taken to reduce or eliminate the long-term risk to human life and property from natural hazards. It is the result of a systematic evaluation of the nature and extent of vulnerability to the effects of natural hazards present in Lexington-Fayette County and includes those actions needed to minimize future vulnerability to those hazards. The Lexington-Fayette County Hazard Mitigation Plan has incorporated local mitigation experiences, reviewed and listed a variety of mitigation projects, and examined the experiences of other local jurisdictions. It has taken advantage of the collective mitigation knowledge of many State, Federal, and Local officials, as well as representatives from both the public and private sectors, and is designed to help safeguard the citizens of Lexington-Fayette County. As such, it should significantly contribute to the mitigation of future local disasters. Without the help and coordinated assistance of many Federal, State, and Local officials, this program would not be the success it is in Lexington-Fayette County.

This plan is designed to provide a blueprint for hazard mitigation activities in the general sense of the program and is structured to serve as a basis for specific hazard mitigation efforts for any disaster. It is recognized, however, that updates may be required to address specific issues arising from a given disaster.

Planning Process

The Lexington-Fayette County Mitigation Plan was prepared by The Center for Hazards Research and

Policy Development (CHR) at the University of Louisville, in close coordination with the Division of Environmental and Emergency Management (DEEM) and in cooperation with Local stakeholders.

After identifying potential Local stakeholders, an introduction letter from the Director of DEEM was sent asking that each agency assign a liaison to a Steering Committee that would work with DEEM and the CHR team. Steering Committee meetings were scheduled and liaisons were invited to attend. The purpose of these meetings varied but the main objectives were to develop dialogue among the multiple agencies and to create the Plan.

Steering Committee members were key contributors to the development of the Plan, not only through attendance at the meetings but also as providers of data and information used to develop the profile, risk assessment, mitigation strategy, and plan maintenance sections of the Plan.

Assessing Vulnerability

In order to create sub-county data sets and vulnerability estimates, data was collected and analyzed at the census tract level. A Hazard Vulnerability score for each census tract was calculated. Hazard Vulnerability scores were determined by using a formula with the following variables:

1. Exposure Score – Information on Population, Property Values, Critical Facilities, Transportation Facilities, Hazardous Materials, and Social Vulnerability were used to produce this Exposure Score.
2. Hazard Score – Information on past number of occurrences per hazard and area effected by the hazard were used to produce the Hazard Score.

A census tract's vulnerability score allows for a more focused mitigation approach to those census tracts showing high vulnerability to certain hazards. By using the vulnerability scores to focus mitigation efforts, time and resources can be utilized more effectively toward the reduction of loss to life and property. Uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning natural hazards and their effects on the built environment. Uncertainties also result from approximations and simplifications that are necessary for a comprehensive analysis (such as incomplete inventories, demographics, or economic parameters).

Estimating Potential Losses

To further understand the impact of natural hazards in Lexington-Fayette County, existing building and critical facility locations were mapped. These locations were used to identify which existing buildings and critical facilities are located in areas susceptible to natural hazards. By using best available building values the potential loss, in dollars, was estimated for each hazard.

These estimates provide a dollar representation of damage caused by natural hazard events and will allow a more focused mitigation approach to those census tracts showing high potential losses to certain hazards. Uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning natural hazards and their effects on the built environment. Uncertainties also result from approximations and simplifications that are necessary for a comprehensive analysis (such as incomplete inventories, demographics, or economic parameters).

Mitigation Strategy

Lexington-Fayette County, through DEEM and in partnership with CHR, implemented a process for determining appropriate mitigation goals, objectives and actions that can serve as a blueprint for reducing losses as identified in the risk assessment.

Establishing goals and objectives: Compiled from two public meetings, DEEM, the CHR staff and the Steering Committee's analyzes of the risk assessment sections; the mitigation goals were designed to be general guidelines of what is to be achieved. The goals are for the long-term and represent the overall vision of the mitigation plan. The objectives define the strategies and implementation steps to attain the identified goals.

These goals and objectives were determined by the Steering Committee to have the greatest benefit in hazard mitigation for Lexington-Fayette County.

Identification and Analysis of Mitigation Measures: This section identifies, evaluates, and analyzes a comprehensive range of specific mitigation actions being considered to reduce the effects of each hazard identified in the Risk Assessment, with emphasis on new and/or existing buildings and infrastructure.

These actions are based on the evaluation of the risk assessment by the Steering Committee and public comment.

Prioritization of Mitigation Actions: The hazard mitigation actions were developed and prioritized by the Steering Committee. Planning for the actions included assigning departments responsible for administration and implementation, and